

**AMENDMENT TO THE SPECIFICATION**

Please REPLACE the Abstract of the application with the following:

According to some embodiments, an enhanced heat exchanger may be provided. The enhanced heat exchanger may comprise, for example, a heat transfer portion to receive heat from a heat source and to transfer heat from the heat source, and a remote heat sink adjacent to the heat transfer portion to remove heat from the heat transfer portion. In some embodiments, the remote heat sink may comprise a solid metal portion that extends away from the heat transfer portion, and a porous medium coupled to the solid metal portion. According to some embodiments, the porous medium may extend away from the solid metal portion such that a thermal boundary layer exists in substantially the entire porous medium.